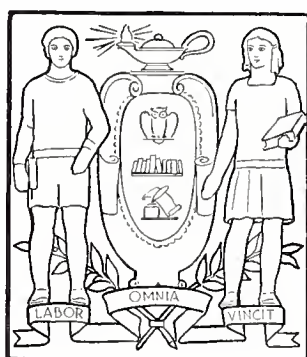


Pennsylvania Curriculum Studies

Nutrition and the School Lunch



BULLETIN 100

1935

Commonwealth of Pennsylvania
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The Nutritional Program

THERE is probably no factor that is of more fundamental importance to the well-being of the individual, both children and adults, than is nutrition. The attainment of full physical and mental abilities are dependent to a great degree upon proper nutrition. The word "nutrition" implies not only food itself, but is digestion and utilization by the body as a fuel for physical activities and as a material to be built into body structure. It is affected by many factors including exercise, fatigue, amount of sleep, physical handicaps, and disease. Health, welfare and educational agencies are working cooperatively to improve the health status of children, and their efforts are based upon the belief that nutrition service is fundamental and should be an intimate part of the whole educational program.

If such a program is to be effective, the materials on this subject should be, first of all, scientifically sound and suited to the age, intelligence and interest of children. Emphasis should be on the positive rather than on the negative aspects. In the kindergarten and lower grades, its purpose is to center attention on the habit to be taught, to develop a favorable attitude toward it and, most important of all, to send the children home determined to put their knowledge into practice. In the intermediate grades, a simple but accurate body of subject matter should be presented with emphasis upon a few rather than many outstanding nutritional facts. In the upper grades and high school, it becomes more essential that habit formation be based upon adequate and accurate information. The student should have a sufficient body of basic facts so that he can select his own diet intelligently and not accept as truth the claims of commercial salesman and food faddists.

The school lunch provides practical opportunity for the proper selection of foods and for establishing proper eating habits. This is done through providing an actual meal for children and thus offering an opportunity for the proper selection of foods suitable for lunch.

Of equal importance to the school program in nutrition is one in connection with adult education classes in home economics, health and other fields. Adult classes provide an opportunity to reach the individual who is out of school and responsible for preparing the right kinds of diet both for themselves and for their children.

LESTER K. ADE

Superintendent of Public Instruction

December 1, 1935.

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Nutrition and the School Lunch

THE HEALTHY CHILD

ALL TEACHERS and parents should know signs by which a child may be adjudged to be well, that is, in satisfactory condition. Some signs can only be discovered by a doctor.

In a general way, external appearances should tally with the discoveries which a doctor may make by special methods for determining the exact physical condition of a child's organs. Simple instruments or lighting apparatus are required to make tests of heart and lungs and to determine mouth, nose and throat, and eye and ear conditions.

VISIBLE MARKS DISTINGUISHING HEALTH

The visible marks distinguishing a healthy child are as follows: abundant hair with a natural luster; bright, clear eyes; breathing with a closed mouth; well formed and even teeth, free of cavities; a sweet breath and moist, clean, red tongue; clear skin, ruddy, pink and smooth. (In colored children, the pink of the mucous membranes of lips and eyes, and the finger nails are indicative of health.)

The fat underneath the skin should be firm and enough in quantity to lift with the skin. The muscles should be firm and strong and the weight should show a steady upward trend.

The posture should show a straight back, laterally, shoulders not drooping forward, shoulder blades flat against the back, not "winged."

The long bones of arm and leg are straight with no undue enlargement of the ends of the bones, and the abdominal wall firm and curved according to the age, decreasing in prominence from babyhood to early adolescence when the chest is more forward.

Ankles should be straight and feet strong and limber with normal arches. A line drawn from the inner border of the heel to the outer border of the great toe should be straight.

The child's general expression and behaviour should show alertness and interest. The spontaneous or guided play should be vigorous without flightiness or over-activity.

The appetite and digestion should be good, the elimination regular and natural; sleep quiet and sound, and the give-and-take in play and at work, alone and with others, suitable and agreeable.

FACTORS CONTRIBUTING TO HEALTH

Only recently have we begun to understand the main factors which contribute to the making of the healthy person and how these factors are related to one another. They may be grouped under six general headings: eating, sleeping, bathing, clothing, exercise and fresh air, and elimination. Every child should be reared from earliest infancy into firmly fixed habits of right eating, right sleeping, right bathing, right exercise and play, right dressing, and right elimination.

THE ROLE OF NUTRITION IN HEALTH

Eating is placed first on the list because of its importance, but it is important to remember that to allow good food habits to do their best work for a child, all the rest of the child's health habits must be right. Even one faulty habit may defeat the good accomplished for the body by all the other good habits. For example, perfectly chosen food, perfectly prepared and correctly eaten, may fail to build the body of a growing child as it ought because the child never gets enough sleep, and so with other habits.

NUTRITION FACTS AND INFORMATION

Because of the importance of nutrition in relation to health, there is need for wide-spread information concerning the composition of food and its selection on the basis of nutritional needs at all age levels and particularly on the basis of nutritional needs of children. The White House Conference Sub-Committee on Nutrition found that according to conservative estimates over six million of the forty-five million children in the United States, or one in every six or seven, were malnourished.

DEFINITION OF FOODS*

Foods are defined as those substances which when taken into the body furnish energy, build and repair tissues, and regulate body processes. In other words, food is eaten for three main purposes: (a) to make us grow, (b) to give us strength and energy with which to work and play, (c) to keep the body in such good condition that we will resist disease.

Sometimes the body is likened to an engine. The engine must have fuel to make it go; so must the body have fuel in the form of food to keep it going. The engine runs when the fuel burns. Food is burned in our bodies, but in a different way, because it burns without a flame.

Parts of the engine wear out and must be replaced. In the same way, parts of our body wear out and the food we eat replaces and repairs the worn-out tissues and parts. An engine needs to be oiled or lubricated to run smoothly. The body must be lubricated and some foods are used for this purpose as regulators of body processes. Just as the engine needs a spark to ignite the fuel, so the body must have certain protective foods (minerals, vitamins) for this purpose, and to promote the health of the body.

CLASSIFICATION OF FOODS AND THEIR FUNCTION IN THE BODY

EIGHT FACTORS IN THE FOOD SCALE

PROTEINS

Foods that mainly build muscle and repair tissue. We depend upon the following foods for proteins. Select one for each meal.

* Elementary Home Economics. Matthews. Little Brown and Company, Boston, Massachusetts.

Milk	Veal	Liver	Fish
Eggs	Pork	Chicken	Beans
Cheese	Mutton	Beef	Peas
Lean meat	Lamb	Poultry	Lentils
			Nuts

CARBOHYDRATES (Starches, Sugars)

Foods that supply mainly fuel or energy and warmth. We depend upon the following foods for carbohydrates. Select two for each meal.

Starches	Starchy vege-	Crackers	Sugars	Preserves
Bread	tables—	Rice	Sugar	Jellies
Cereals	Carrots	Tapioca	Molasses	Dried fruits
Noodles	Beets	Beans	Syrup	Candy
Macaroni	Potatoes, etc.	Peas	Honey	Cake
				Cookies
				Desserts

FATS

Foods that supply energy and warmth. We depend upon the following foods for fats. Select one or two for each meal.

Cream, very fat ham or pork	Bacon
All salad oils	Lard
All soups containing cream	Margarines
Sweet chocolate	Vegetables and nut oils
Foods cooked in fats	Peanut Butter
Butter	Egg yolks
Cheese	

TONICS

Foods that supply mainly minerals or acids or both. Select one for each meal.

All fresh, green vegetables	Fruit drinks	Nuts	Figs
Cabbage	Fruit ices	Whole cereals	Raisins
Turnips	Salad plants	Prunes	Bananas
Onions	Fruit gelatin	Dates	Apples
Spinach			Oranges

CLEANSERS

Foods that supply mainly bulk. Select one or more for each meal.

- Cereals
- Coarse breads—whole wheat
- All coarse vegetables as parsnips, spinach and all unprepared fruit

DISSOLVENTS

Foods that furnish mainly liquid to the body. Select one or two for each meal.

Soups	Milk
Water	Watery fruits as watermelon
Coffee	Watery vegetables as cucumbers or tomatoes
Tea	

VITAMINS

PROTECTIVE OR VITAMIN RICH FOOD

Foods that supply the necessary elements to life and growth. Select one or two for each meal.

Vitamin A (fat soluble A), found in green vegetables, egg yolk, and butter. When children are not given enough of these foods they are undeveloped, sickly, and may develop infections in the eyes, sinuses, ears, glands of the mouth and throat.

Good sources of Vitamin A*

Animal Products

Cod Liver Oil	Egg yolk
Liver	Salmon
Butter	Cheese, whole milk
Cream	Kidney
Milk	

Plant Products—Green and yellow vegetables

Spinach	Carrots	Chard
Escarole	Celery, green	Beet leaves
Romaine	Sweet potatoes	Mustard greens
Lettuce, green	Peas	Dandelion greens
Kale	Squash, yellow	Brussels sprouts
Watercress	Peppers	Asparagus
Turnip tops	Broccoli	Tomatoes, red and yellow
Beans, string, green	Endive	Cornmeal, yellow

Fruits

Bananas	Cherries	Avocado
Apricots	Olives, green and ripe	Prunes
Peaches, yellow		Pineapple
Mushmelon		Papaya

Vitamin B (water soluble B), found in green vegetables, whole cereals and fruit juices. A lack of this vitamin causes malnutrition, a loss of appetite and a disease called beriberi. Vitamin B is destroyed by heat more readily than Vitamin A and long cooking of vegetables is therefore undesirable. Also, since this vitamin is very soluble in water, it may be easily "washed out" in cooking when much water is used. Soda destroys the vitamin and, therefore, it is a bad practice to add it when cooking vegetables even though one wishes to preserve the green color in the vegetables.

* Foods rich in vitamins—Munsill. Bureau of Home Economics. Washington, D. C.

Good sources of Vitamin B

Animal Products

Liver	Heart	Lean pork	Oysters
Kidney	Egg yolk	Brains	Milk

Plant Products

Asparagus	Dasheens	Carrots	Kohlrabi
Spinach	Romaine	Potatoes, white	Okra
Tomatoes	Turnip greens	Cabbage	Onions
Peas	Mustard greens	Beet leaves	Parsnips
Kale	Chard	Cauliflower	Rutabagas
Snap beans	Celery	Lettuce	Peppers, green
	Sweet Potatoes	Broccoli	Turnips

Fruits

Grapefruit	Pineapple	Avacado	Dates
Lemons	Apples	Grapes	Cherries
Oranges	Watermelon	Cantaloupes	Pears
Bananas	Peaches	Prunes, fresh	

Seeds

<i>Whole grains</i>	<i>Nuts</i>	<i>Legumes</i>
Wheat	Almonds	Beans, all kinds
Rye	Walnuts	Cowpeas
Corn	Chestnuts	Lentils
Rice	Brazil nuts	Dried peas
Barley	Pecans	
Oats	Peanuts	

Vitamin C (water soluble C), found in orange and lemon juices, uncooked green vegetables, fresh fruit and tomatoes. A lack of this vitamin causes skin diseases, bleeding gums, loose teeth, sore joints, loss of appetite. An acute condition of this kind is known as scurvy. Vitamin C is easily destroyed by heat at fairly low temperatures and is most easily destroyed in a solution of water and soda. With the exception of tomatoes, cooked foods cannot be depended upon entirely for Vitamin C nor does the body store a supply of this vitamin, hence the need for some raw fruits and raw vegetables every day.

Good sources of Vitamin C

Fruits

Oranges	Strawberries	Mushmelon	Peaches
Lemons	Cherries	Currants, black and red	Pineapple
Grapefruit	Raspberries	Cranberries	Gooseberries
Tangerines	Watermelon	Bananas	Apples

Vegetables

Cabbage	Celery	Peas	Legumes, sprouted
Tomatoes	Parsley	Watercress	Rhubarb
Broccoli	Endive	Corn	Cucumbers
Rutabagas	Peppers	Turnips	Cauliflower
Snap beans	Spinach	Turnip, greens	Radishes
Brussels Sprouts			

Vitamin D—The Sunshine Vitamin. This vitamin is known to prevent rickets, and is not easily destroyed by heat, so ordinary cooking does not affect it.

Good sources of Vitamin D.

Egg yolk	Cod Liver Oil	Butter
Salmon	Oysters	Milk
	California sardines	

Vitamin E is essential for reproduction and is known as the anti-sterility vitamin. It occurs in a great many foods in small quantities but the germ of the wheat grain is especially rich. Vegetable oils, green lettuce, and a number of other vegetables contain considerable quantities of Vitamin E. It is not readily destroyed by heat.

Vitamin G is essential to growth and well-being at all ages. A lack of this vitamin causes sore mouth, digestive disturbances, and in time a sensitiveness and inflammation of the skin. Foods that contain Vitamin G are beneficial in preventing and curing pellagra, a common disease in certain

Some good sources of Vitamin G

sections where people live on an inadequate diet.

Animal Products

Milk	Cheese	Heart—Beef
Whole	Eggs	Lean Cuts
Fresh	Beef	Beef
Dried	Pork	Veal
Evaporated	Meat—Liver	Pork
Skim	Kidney	Lamb
Buttermilk	Spleen	Salmon

Plant Products

Green leaves	Spinach	Beet tops	Cabbage
Mustard	Watercress	Carrot tops	Beets
Kale	Lettuce	Cauliflower	Carrots
Turnip tops	Broccoli	Potatoes	Wheat germs and yeast

Fruits

Pears	Grapefruit	Oranges
Bananas	Lemons	

MINERALS—(The Body Builders)

FOODS HIGH IN MINERALS*

They are called mineral salts. There are twelve minerals, but in the light of present day knowledge calcium, phosphorus and iron are considered the most necessary for body building. Like the vitamins, each mineral performs a specific duty; it also helps all the other food factors to build a normal body.

<i>Calcium</i>	<i>Phosphorus</i>	<i>Iron</i>
Almonds	Almonds	Almonds
Beans	Beans, dried	Apricots
Dried lima	Beef, lean	Bananas
Dried navy	Beets	Beans,
Dried string	Buttermilk	Dried
Beets	Carrots, raw	String
Brussels Sprouts	Celery	Fresh
Buttermilk	Cheese, fresh Am.	Beef, lean
Raw Cabbage	Chocolate, unsweet- ened	Beets
Raw Carrots	Cocoanut, fresh	Cabbage, raw
Celery	Corn, canned	Carrots, raw
Cheese, fresh Am.	Egg	Celery
Chocolate, unsweet- ened	Farina, dark	Cocoa
Cocoa	Grapefruit	Cocoanut, fresh
Cornmeal	Hominy grits	Cornmeal
Dates	Liver	Dandelion greens
Egg	Macaroni	Eggs
Farina, dark	Milk	Farina, dark
Flour	Condensed	Flour
Graham	Skinmed	Graham
Rye	Whole	Rye
Grapefruit	Molasses, cane	Grapefruit
Grape Juice	Mutton	Lentils
Molasses, cane	Oranges	Liver
Oatmeal	Peanuts	Macaroni
Orange Juice	Pears, fresh	Mutton
Peaches	Potatoes	Oranges
Peanut Butter	Prunes	Oats, rolled
Pears, fresh	Raisins	Peanut Butter
Peas	Shredded Wheat	Pears, fresh
Canned	Spinach	Pineapple, fresh
Dried	Walnuts	Potatoes
Pineapple, fresh	Wheat, whole	Spinach
Potatoes		Rhubarb
Prunes		Walnuts
Raisins		Wheat, whole
Rice, unpolished		
Spinach		
Tomatoes		
Turnips		
Wheat, whole		

* Child Nutrition. Pritchett. State Department of Welfare, Harrisburg, Pennsylvania.

Calcium

Helps to build teeth and bones
 Aids the movements of the muscles
 Aids the rhythmic beat of the heart
 Helps the nerves to carry the right messages to the brain
 Helps to coagulate the blood
 Aids digestion

Phosphorous

Necessary to the life and growth of every cell
 Aids the cells to multiply
 Gives rigidity to teeth and bones, and prevents rickets

Iron

Forms a part of every cell
 Carries oxygen
 Promotes growth of cells
 Stimulates the action of the cells

It may seem as though a whole kitchen force will be needed to include these eight factors in one menu, but as a matter of fact, a very simple and inexpensive meal may contain all of them. For example:

LUNCH

Tomato Omelet	Boiled Brown Rice
Whole-Wheat Bread and Butter	
Lettuce with French Dressing	
Stewed Apricots	
Milk	

The omelet, a protective food, is also a protein and contains bulk, with minerals, acid and vitamins in the tomatoes. The brown rice supplies starch, bulk, vitamins and minerals. The bread contains starch, vitamins and minerals. The butter is a fat, as well as being a protective food. The lettuce furnishes bulk, minerals and protective elements. The oil in the French dressing supplies fat and the apricots bulk and sugar.

CALORIES AND HUNDRED CALORIE PORTIONS**DEFINITION OF A CALORIE**

A calorie is the amount of heat required to raise the temperature of one pound (one pint) of water approximately four degrees F., or a kilogram of water one degree C.

EXPLANATION OF A CALORIE*

We have learned that three of the nourishing substances found in foods—carbohydrates, fats and proteins—oxidize or “burn” in the body,

* Foods and Homemaking. Greer. Allyn and Bacon, New York,

they give us energy or heat. These materials in our foods are valuable in part because they give us energy and make us warm. The amount of heat any food gives to the body is measured in calories. The *calorie measures quantity of heat*, just as one inch or one foot measures a certain length.

Imagine a pound or pint of water in a saucepan. The temperature of the water we shall suppose is 60 degrees F. Then think of this pint of water being placed on a burner and heated until the temperature is 64 degrees F, about one calorie of heat would have been applied to the water.

TABLE OF APPROXIMATE FOOD REQUIREMENTS IN CALORIES FOR
BOYS AND GIRLS *

Age in Years	Calories Each Day	
	Boys	Girls
6- 7	1400-1700	1300-1600
7- 8	1500-1800	1380-1680
8- 9	1600-1900	1460-1760
9-10	1700-2000	1550-1850
10-11	1900-2200	1650-1950
11-12	2100-2400	1750-2050
12-13	2300-2700	1850-2150
13-14	2500-2900	1950-2250
14-15	2600-3100	2050-2350
15-16	2700-3300	2150-2450
16-17	2700-3400	2250-2550

An easy method of calculating the heat and energy value of food is the use of the following one hundred calorie portion table.

LIST OF 100 CALORIE PORTIONS OF COMMON FOODS **

Name of Food	Amount Needed to Furnish 100 Calories
Breads, etc.	
White	1 thick or 2 thin slices
Whole wheat	slice (3 x 3½ x ½), 1.3 oz.
Gluten	slice (3 x 3½ x ½), 1.3 oz.
Rye	slice (3 x 3½ x ½), 1.3 oz.
Corn	slice (2 x 2 x 1) in.
Boston, brown	slice (3 x ¾) in.
Biscuit, baking powder	2 small
Rolls	1

* Food Allowances for Healthy Children. Association for Improving the Conditions of the Poor, Gillett, New York.

** Nutrition and Physical Fitness. Bogert, W. B. Saunders Co., Philadelphia.

<i>Name of Food</i>	<i>Amount Needed to Furnish 100 Calories</i>
Griddle cakes	1, 4 in. diam.
Waffles	$\frac{1}{2}$, 6 in. diam.
Muffins	$\frac{3}{4}$
Toast	1 $\frac{1}{3}$ slices, thin
Zwiebach	3 slices, ($3\frac{1}{4} \times 1\frac{1}{4} \times \frac{1}{2}$ in.)
Crackers	
Graham	3
Oatmeal	7
Oyster	24
Saltines	6
Soda	4
Cereals	
Cooked	
Oatmeal	About $\frac{3}{4}$ cupful
Cracked wheat	About $\frac{3}{4}$ cupful
Farina	About $\frac{3}{4}$ cupful
Cornmeal	About $\frac{3}{4}$ cupful
Ready to serve	
Corn flakes	About $1\frac{1}{2}$ cupful
Puffed cereals, etc.	About $1\frac{1}{2}$ cupful
Shredded wheat biscuit	1
Grape-nuts	2 rounding tbsp.
Macaroni, spaghetti, etc.	
Plain	$\frac{3}{4}$ cupful
With cheese	$\frac{1}{2}$ cupful (scant)
Cake and cookies	
Cake, plain	piece, $1\frac{3}{4}$ in. cube (icing, nuts, fruits, etc. extra)
Chocolate	piece, ($2\frac{1}{2} \times 2\frac{1}{2} \times 1$ in.)
Angel or Sponge	piece, about 2 in. cube
Gingerbread	piece, ($1 \times 2 \times 2$ in.)
Plain cookies	1 large or 2 small
Ginger snaps	5
Doughnuts	$\frac{1}{2}$
Pies	
With top crust	slice, $1\frac{1}{2}$ in. at circumference ($\frac{1}{4}$ large serving)
Without top crust	slice, 2 in. at circumference ($\frac{1}{3}$ large serving)

<i>Name of Food</i>	<i>Amount Needed to Furnish 100 Calories</i>
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Custards, puddings and desserts

Cup custard	1/3 cupful
Plain blanc mange	1/3 cupful
Chocolate blanc mange	1/4 cupful (scant)
Plain gelatin	1 cupful (scant)

Custards, puddings and desserts

Simple rice pudding	1/2 cupful (scant)
Simple bread pudding	1/2 cupful (scant)
Simple tapioca pudding	1/2 cupful (scant)
Water ices	1/2 cupful (scant)
Ice Cream	1/4 cupful (approx.)

Candies

Molasses, peppermints or lemon drops	About 1 oz.
Syrup	1 1/2 tbsp.
Honey	1 1/2 tbsp.
Jam	1 1/2 tbsp.
Jelly	1 1/2 tbsp.
Sugar	2 tbsp. (1 1/2-3 lumps depending on size)

Meats

Any lean meat, about	2 oz. (piece 3 x 2 x 1/2 in.)
Any fat meat, about	1 oz. (meat part of lamb chop, about 1 oz.)
Sausage	2 small
Bacon	4 small crisp slices
Chicken, broiled or creamed	1/4 cupful (approx.)

Fish

Lean fish	3 oz. (two small servings or piece 3 x 2 1/4 x 1 in.)
Fat fish	2 oz. (one serving)
Oysters	12
Sardines	4 (1 1/2 oz.)
Salmon, canned	1/2 cupful
Tuna fish, canned	1/2 cupful
Lobster	3/4 cupful (4 oz.)
Eggs, whole	1 1/3
Eggnog	1/2 cupful (scant)

Milk and milk products

Whole milk	5/8 cupful (5 oz.)
Skimmed milk	1 1/4 cupful (10 oz.)
Buttermilk	1 1/4 cupful (10 oz.)

<i>Name of Food</i>	<i>Amount Needed to Furnish 100 Calories</i>
Cream	
Thin	$\frac{1}{4}$ cupful
Thick	$1\frac{1}{4}$ tbsp.
Whipped	1 heaping tablespoon
Evaporated milk (unsweetened)	4 scant tablespoons
Condensed milk (sweetened)	$1\frac{1}{4}$ tbsp.
Milk powder	1 rounded tbsp.
Malted milk	1 rounded tbsp.
Cheese	
Avg. solid cheese	1 in. cube (approx.)
Cottage	2 heaping tbsp.
Butter (or margarine)	1 level tbsp. (piece $1 \times 1 \times \frac{1}{4}$ in.)
Olive oil (or other oils and fat)	1 scant tbsp.
Nut butters	1 rounding tbsp.
Nuts	
Chestnuts	20 small
Almonds or peanuts	10-12 large
Filberts	10
Pecans	5 large
Walnuts (English)	4 large
Brazil	2 large
Cocoanut (prepared)	$\frac{1}{5}$ cupful ($\frac{1}{2}$ oz.)
Cocoa, beverage	$\frac{1}{3}$ - $\frac{3}{5}$ cupful (varying with richness and sweetness)
Chocolate, beverage	$\frac{1}{4}$ - $\frac{1}{2}$ cupful (scant)
Fruits	
Dried fruits	
Dates	3-4
Figs	2 medium sized
Raisins and currants	$\frac{1}{4}$ cupful
Fresh fruits	
Banana	1 large
Orange	1 large
Grapefruit	$\frac{1}{2}$ large
Apples	2 medium
Pears	2 medium
Peaches	3 medium
Plums	3-4 large
Apricots	3-4 large
Lemons	3-4 large
Olives	
Ripe	6
Green	8

<i>Name of Food</i>	<i>Amount Needed to Furnish 100 Calories</i>
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Pineapple	
Fresh	2 slices, 1 in. thick
Canned	1 slice and 3 tbsp. juice
Prunes, stewed	2 and 2 tbsp. juice
Berries	1 cupful
Cherries, stoned	1 cupful
Grapes	30 (good sized)
Cantaloupe	1 melon, 4½ in. diam.
Watermelon	¾ lb. (6 large slices)
Stewed fruits	½ cupful approx.
Fruit juices	
Orange juice	1 cupful
Grapefruit juice	1 cupful
Lemon juice	1 cupful
Grape juice	½ cupful
Vegetables (exclusive of butter or sauces added)	
Potatoes	
White, baked or boiled	1 medium (3 oz.)
White, mashed or creamed	⅓-½ cupful
Sweet	½ medium
Potato chips	8-10 large pieces
Beans, cooked	1/3 cupful
Corn, canned	1/3 cupful
Succotash	1/3 cupful
Lentils	1/3 cupful
Peas, canned	1/3 cupful
Beets	1 cupful, cooked (½ lb. plain)
Carrots	1 cupful, cooked (½ lb. plain)
Onions	1 cupful, cooked (½ lb. plain)
Parsnips	1 cupful, cooked (½ lb. plain)
Turnips	1 cupful, cooked (½ lb. plain)
Squash	1 cupful, cooked (½ lb. plain)
Tomatoes, canned	2 cupfuls
String beans	2 cupfuls
Spinach, cooked	2 cupfuls
Tomatoes, raw	2-3 medium
Cabbage (raw, shredded)	5 cupfuls
Cauliflower	1 small head
Asparagus	20 large stalks
Celery	30 stalks
Cucumbers	3, six inches long
Radishes	30
Lettuce	2 good-sized, firm heads
Asparagus	1 pound, average
Cabbage	1 pound, average
Cauliflower	1 pound, average
Celery	1 pound, average

<i>Name of Food</i>	<i>Amount Needed to Furnish 100 Calories</i>
Cucumbers	1 pound, average
Lettuce	1 pound, average
Radishes	1 pound, average
Spinach	1 pound, average
Tomatoes	1 pound, average
Salads	
Green salads with French dressing	1-2 servings
Avg. salad with mayonnaise dressing	$\frac{1}{2}$ serving
Date and nut salad with mayonnaise dressing	$\frac{1}{4}$ serving
Mayonnaise dressing	1 tbsp.
Soups	
Bouillon or consomme	4 cupfuls
Chicken, vegetable or thin legume soups	1 cupful
Cream soups	$\frac{1}{2}$ cupful (scant)
Sauces	
Gravy, brown	$\frac{1}{2}$ cupful
White sauce	$\frac{1}{4}$ cupful
Cream sauce	$\frac{1}{6}$ cupful
Lemon sauce	$\frac{1}{8}$ cupful
Tomato sauce	5 tbsp.
Chocolate sauce	2 tbsp.
Hard sauce	1 tbsp.

AVERAGE ANNUAL GAIN IN WEIGHT AND HEIGHT *

<i>Boys</i>			<i>Girls</i>		
<i>Age</i>	<i>Weight</i>	<i>Height</i>	<i>Age</i>	<i>Weight</i>	<i>Height</i>
6- 7	4 lbs.	2 in.	6- 7	4 lbs.	2 in.
7- 8	4 $\frac{3}{4}$ lbs.	2 in.	7- 8	4 $\frac{1}{2}$ lbs.	2 in.
8- 9	5 $\frac{1}{4}$ lbs.	2 in.	8- 9	5 lbs.	1 $\frac{3}{4}$ in.
9-10	6 lbs.	2 in.	9-10	5 $\frac{1}{4}$ lbs.	2 $\frac{1}{4}$ in.
10-11	5 lbs.	1 $\frac{1}{2}$ in.	10-11	6 $\frac{1}{2}$ lbs.	2 in.
11-12	6 $\frac{1}{2}$ lbs.	1 $\frac{3}{4}$ in.	11-12	9 $\frac{1}{2}$ lbs.	2 $\frac{1}{4}$ in.
12-13	8 lbs.	2 in.	12-13	10 $\frac{1}{2}$ lbs.	2 in.
13-14	10 lbs.	2 $\frac{1}{2}$ in.	13-14	9 $\frac{1}{2}$ lbs.	2 in.
14-15	12 $\frac{1}{2}$ lbs.	2 $\frac{3}{4}$ in.	14-15	7 $\frac{1}{2}$ lbs.	1 $\frac{1}{4}$ in.
15-16	13 $\frac{3}{4}$ lbs.	2 $\frac{3}{4}$ in.	15-16	6 lbs.	$\frac{3}{4}$ in.

* The averages are calculated from about 100,000 observations upon children in public and private schools in the United States compiled by ten different authors.

THE HOME'S OBLIGATION

Feeding the family is one of the home's obligations. In general this means planning, preparing and serving three meals a day. For most children each meal should contain approximately one-third of each day's food requirements. The homemaker needs to (1) select foods for their nourishing value, (2) plan the food budget carefully, (3) find new ways of preparing interesting dishes.

ESSENTIALS IN THE FAMILY DIETARY *

As a working basis in building up the family dietary, it is a good plan to make first a list of the food materials which need to be included in the day's rations, no matter what the particular menu may be. For the average family group there should be provided:

- Milk for all—one quart for each child and a pint for each adult, if possible
- Fruit juice for the one-year old
- At least one kind of fruit for the others
- Cereal for all the children—preferably for all the family
- A mild green vegetable for the youngest children
- At least one kind of vegetable besides potatoes for all the others
- Eggs for at least the youngest children and some protein-bearing dish (meat or a meat substitute) for the rest

DIVIDING THE FOOD DOLLAR **

1. HOW TO SPEND YOUR FOOD MONEY WISELY

To go without the proper food for any length of time means a run-down condition or actual sickness and doctor bills. So, if adults are to feel well and able to work, if children are to be healthy and able to go to school, they must have food enough and they must have *the right kinds of food*.

The less money one has to spend the more important it is to choose the right combinations of food and to get the most food value for your dollar. Special week-end sales or end-of-the-day bargains should be used to the best advantage, especially in the case of perishable fruits, vegetables and meats. Perishable foods should be purchased only in quantities for immediate consumption to avoid waste.

If storage space permits, non-perishable foods should be bought in quantity to profit by the lower unit cost. Many pennies may be saved by buying a peck of potatoes instead of a few pounds; three tins of canned goods for a quarter rather than single cans at a dime; butter in pounds instead of quarter pounds. A good rule is to purchase by weight, and in bulk. Packaged goods prices are usually higher.

2. DIVIDING THE FOOD DOLLAR

- a. One-fourth or more for milk or its equivalent—Buy:
(25 to 30 cents)

* Feeding the Family. Rose. The Macmillan Company, New York.

** Bureau of Home Economics. U. S. Department of Agriculture.

For each child at least 1 pint of milk daily. He *should* have 1½ pints to 1 quart.

For each pregnant or nursing mother 1 pint of milk daily. She *should* have 1½ pints to 1 quart.

For each other adult ½ pint of milk daily. He *should* have 1 pint.

NOTE: Choose any of the following forms of milk: Pasteurized fluid milk, evaporated milk, dried milk, whole-milk cheese. Milk does more for the body than any other food, and does it more cheaply. It safeguards the low-cost diet, for children and adults. It prevents pellagra. It is the best all-round body-building food.

The following are about equal in food value:

- 1 quart fluid whole milk
- 1 tall can evaporated milk
- 1 quart skim milk plus 3 tbsp butter
- 3½ oz. dried skim milk plus 3 tbsp butter

b. One-fourth or slightly less for vegetables and fruit—Buy:

(25 to 20 cents)

Canned tomatoes—use at least twice a week

Cabbage—use at least twice a week (part raw)

Potatoes—use as often as possible

Greens and other vegetables when possible

Dried beans and peas

The cheaper dried fruits

NOTE: Tomatoes, oranges and raw cabbage have special values. Give babies and little children some tomato juice or orange juice every day. Use for all the family often. Dried beans and peas are many-sided foods. Use them freely in low-cost rations. Vegetables and fruits are needed by everybody. When tomatoes or raw cabbage are provided, add greens, and as many vegetables and fruits as possible. Use potatoes daily, if possible. Five and one-half pounds of potatoes, or 3½ pounds of sweet potatoes, provide as much fuel as 1 pound of flour, rice or other grain foods. Cook potatoes in their skins to keep their full food value.

c. About one-tenth for eggs, lean meat, fish—Buy:

(10 cents)

Eggs and fresh fish when prices are low, canned salmon, liver, and the cheaper cuts of lean meat.

NOTE: Lean meat, fish, poultry, eggs and cheese are muscle-building foods. Like milk, they prevent pellagra (a disease marked by skin eruptions and disturbance of the digestive and nervous systems). Eggs are especially important for children.

d. One-fifth or more for bread, flour, cereals—Buy:

(20 cents)

Some whole-grain cereals, such as oatmeal and cracked wheat, and some whole-wheat bread, as well as other bread and cereals.

NOTE: All grain foods are cheap body fuels. Combined with milk, they are also good for body building. Dark grain foods are important in low-cost diets because they contain valuable parts usually taken away in milling.

- e. The rest about one-fifth for fats, sugars, accessories—Buy:
(20 cents)

Lard, salt pork, butter, margarine, vegetable oil. Cane molasses, sorgo syrups, sugar, corn syrup. Salt, baking powder, tea, coffee, cocoa.

NOTE: Foods rich in fat supply abundant fuel and give rich flavor to the meal. But too much fat delays digestion. Use milk fat in some form everyday, especially for children. Dark molasses and cane or sorgo syrup are good for sweetening and have more all-round food value than pure sugar. Sweets for children are best at the end of a meal. They spoil the appetite for other foods.

- (1) Give each child under two years at least two teaspoonfuls of Cod Liver Oil every day. He *should* have three or four. If enough milk is provided for your family so that you need not buy any, divide each dollar as follows:

- 30 cents for vegetables and fruits
- 30 to 25 cents for bread, flour and cereals
- 15 cents for eggs, lean meat and fish
- 25 to 20 cents for fats, sugars, and accessories

If you have plenty of vegetables from your own garden so that you need not buy them, divide each dollar as follows:

- 35 cents for milk and cheese
- 25 cents for bread, flour and cereals
- 15 cents for fats, sugars, and accessories

GETTING THE MOST FOR YOUR FOOD MONEY

A MARKET GUIDE FOR ONE WEEK

PROVIDING ADEQUATE FOOD AT MINIMUM COST

FOODS	One Adult	Three in Family	Five in Family	Seven in Family	Ten in Family	Your Family	
						Amount	Cost
MILK— 1 quart fluid whole milk } have 1 tall can evaporated milk } about 1 quart skim milk plus } equal 3 tablespoons butter } food 3½ oz. dried skim milk } value plus 3 tablespoons butter }	4 qts.	11 qts.	18 qts.	25 qts.	35 qts.		
BREAD— White, Whole Wheat, Rye -----	3½ lbs.	10 lbs.	16 lbs.	21 lbs.	26 lbs.		
CEREALS— Cornmeal, Hominy, Oatmeal, Rice, Cracked Wheat, Whole Wheat, Barley, Macaroni, Noodles }	1 lb.	3½ lbs.	6 lbs.	8 lbs.	10 lbs.		
FLOUR— -----	½ lb.	1½ lbs.	2½ lbs.	3 lbs.	3½ lbs.		
VEGETABLES— Potatoes ----- Cabbage, Spinach, other Leafy Kinds ----- Carrots, Onions, Turnips, Beets, Rutabagas, String Beans ----- Beans, Peas, Lentils ----- Tomatoes—canned (No. 2 cans) -----	3 lbs. 1 lb. 2 lbs. ½ lb. 1 can	9 lbs. 3½ lbs. 6 lbs. 1½ lbs. 3 cans	14 lbs. 6 lbs. 9 lbs. 2½ lbs. 5 cans	19 lbs. 9 lbs. 11 lbs. 3 lbs. 6 cans	24 lbs. 12 lbs. 14 lbs. 4 lbs. 8 cans		
FRUITS— Fresh: Oranges, Apples, Bananas, Others in Season ----- Dried: Apples, Prunes, Raisins, Apricots ----- MEAT—FISH—EGGS—CHEESE— Beef: Rump, Chuck, Plate, Neck, Flank, Liver, Heart, Kidneys Pork: Ham Hocks, Fresh Butts, Loin, Spare ribs, Pig's feet, Liver, Heart, Salt Pork Lamb: Shoulder, Neck, Shank, Liver, Heart, Kidney Veal: Breast, Shoulder, Neck Fish: Canned Pink Salmon, Dried Herring, Codfish, Salt Mackerel, Flounder, Had- doek, Cod	6 pieces ½ lb.	15 pieces 1 lb.	24 pieces 2 lbs.	30 pieces 2½ lbs.	39 pieces 3 lbs.		
	1¼ lbs.	3½ lbs.	6 lbs.	7½ lbs.	10 lbs.		

	¼ doz. ⅓ lb.	1 doz. ¼ lb.	1½ doz. ½ lb.	2 doz. ¾ lb.	3 doz. 1 lb.	Total Cost
Eggs-----						
Cheese: American-----						
⅓ lb. American Cheese about equals ¼ lb. Cottage Cheese						
FATS-----						
Butter, Lard, Salt Pork, Vegetable Oils, Peanut Butter, Other Fats-----	1 lb.	2½ lbs.	4 lbs.	5 lbs.	6 lbs.	
SUGARS-----						
White, Brown; Molasses-----	1 lb.	2½ lbs.	4 lbs.	5 lbs.	6 lbs.	
COCOA, COFFEE OR TEA, as needed-----	¼ lb.	½ lb.	¾ lb.	1 lb.	1½ lbs.	
SALT, CONDIMENTS, FLAVORINGS etc., as needed						
The cost of these foods will vary in different localities and at different seasons. Choose the less expensive ones from each group to provide these foods at minimum cost.						

Prepared by Nutrition Advisory Committee
State Emergency Relief Board
Harrisburg, Pennsylvania

Revised November, 1933

MEALS YOU CAN MAKE FROM THE MARKET ORDER

<i>Breakfast</i>	<i>Dinner</i>	<i>Supper</i>
Fresh Fruit Oatmeal with Milk Bread or Toast Milk for Children Coffee for Adults	Meat Stew with Potatoes Carrots and Onions Bread Milk for Children Apple Betty	Cream of Tomato Soup Bread and Peanut Butter Oatmeal Cookies
Cornmeal with Molasses and Milk Bread or Toast Milk for Children Coffee for Adults	Macaroni and Cheese Chopped Raw Cabbage and Carrot Bread and Butter Milk for Children Tea for Adults Home Canned or Stewed Fruit	Left-over Meat Stew with Rice Bread Milk for Children Apple Betty (left-over)
Cracked or Whole Wheat with Milk Bread or Toast Milk for Children Coffee for Adults	Scalloped Liver and Potatoes Yellow Turnips Bread Milk for Children Oatmeal Cookies	Fried Left-over Cornmeal Mush with Molasses Milk for Children Tea for Adults Raw Apples
Oatmeal with Milk Bread or Toast Cocoa or Milk for Children Coffee for Adults	Stewed or Baked Beans Canned Tomatoes Cold Slaw Bread Milk for Children Tea for Adults	Scrambled or Creamed Eggs Potatoes Cornmeal Muffins or Bread Stewed or Home Canned Fruits
Stewed Fruit Cornmeal with Milk Bread or Toast Milk for Children Coffee for Adults	Boiled Salt Pork or Beef with Cabbage and Potatoes Bread Milk for Children Molasses Cookies	Bean Soup—from left-overs Raw Carrot or Turnip Strips Bread and Butter Milk for Children
Whole or Cracked Wheat with Raisins and Milk Bread or Toast Cocoa or Milk for Children Coffee for Adults	Salmon Loaf Baked Potatoes Creamed Onions Bread Milk for Children Tea for Adults Molasses Cookies	Vegetable Chowder Bread and Butter Rice or other Milk Pudding
Oatmeal with Milk Bread or Toast Milk for Children Coffee for Adults	Spanish Rice (with Cheese and Tomatoes) Escarolle or other Salad Greens Bread Milk for Children	Creamed Eggs and Potatoes Bread Milk for Children Tea for Adults Mixed Fruits

Give each child under three years two teaspoonfuls of cod liver oil during the fall, winter and spring. Give cod liver oil to older children if your doctor advises it.

Give each child under two years orange or tomato juice in such amounts as your doctor advises. At least 1 to 2 tablespoonfuls daily is desirable. Older children and adults also need oranges or tomatoes.

OTHER LOW COST MENUS AND RECIPES

BREAKFAST

Tomato juice or orange juice
 Wheatena, milk and sugar
 Toast
 Cocoa for children
 Coffee for adults

LUNCH

Stewed tomatoes
 Boiled potatoes
 Whole wheat bread and butter
 Milk

DINNER

Meat loaf*
 Creamed turnips
 Baked mashed potatoes
 Bread and butter
 Baked apple dumplings

BREAKFAST

Bananas
 Oatmeal, milk and sugar
 Toast
 Coffee for adults
 Milk or cocoa for children

BREAKFAST

Stewed fruit
 Cornmeal mush, milk and sugar
 Whole wheat toast
 Coffee for adults
 Milk for children

LUNCH

Vegetable soup
 Bread and butter
 Ground meat sandwiches mixed with
 grated raw carrots
 or
 Peanut butter sandwiches

DINNER

Creamed eggs or bean loaf*
 Scalloped tomatoes
 Custard with raisins
 Oatmeal cookies

LUNCH

Onion soup*
 Graham bread
 Butter
 Ginger bread and sauce
 Milk for children

DINNER

Meat stew—turnips, potatoes, onions
 Waldorf salad—apple, nuts, raisins
 Corn bread
 Butter
 Milk for children
 Coffee or Tea for adults

NOTE: If any vegetable or fruit in the suggested menus is out-of-season substitute ones that are in season and therefore less expensive.

VEAL AND HAM LOAF

1 pound veal, ground
 1 pound ham, ground
 1¼ cupfuls bread crumbs
 1 egg, slightly beaten
 2 onions, chopped
 Salt and pepper to taste
 Bacon strips
 2 pimentoes, chopped

* Recipes given.

Combine the ham with half the bread crumbs, egg, onion, and pimentoes and the veal with the other half. Season to taste with salt and pepper. Pack the ham mixture into a greased loaf pan and on top of this lay strips of bacon. Pack the veal mixture on top and cover all with strips of bacon. Bake in a moderate oven 350 degrees for one and one-half hours. Serve hot or cold.

CREAMED EGGS

8 eggs
2 cupfuls milk
 $\frac{1}{4}$ cupful butter
2 tablespoonfuls green pepper, minced
3 tablespoonfuls flour
Dash of paprika
Grating of nutmeg
1 teaspoonful salt

Brown the green pepper in the butter. Add the flour, paprika, nutmeg and salt, and stir until smooth. Add the milk and stir until smooth and creamy. Slice the eggs and stir them carefully into the sauce. If desired, serve on buttered toast.

ONION SOUP

6 onions
4 cupfuls beef stock, seasoned
 $\frac{1}{4}$ pound cheese, grated
4 slices bread
4 tablespoonfuls butter

Slice the onions and fry in two tablespoonfuls butter until soft and light brown. Add the stock and simmer for ten minutes. Toast the bread and spread it with butter and sprinkle with cheese. Place one slice in bottom of each bowl and pour soup over before serving.

TYPE MENUS FOR SCHOOL CHILDREN*

SUGGESTED MEALS FOR BOYS AND GIRLS FROM SIX TO TWELVE YEARS

BREAKFAST

Grapefruit, berries or peaches
Poached or scrambled eggs with
bacon
Crisp toast or muffins—butter
Milk or cocoa
(Use only enough cocoa to flavor
milk)

BREAKFAST

Tomato or orange juice
Oatmeal or wheatena with milk
Crisp toast or rolls—butter
Milk or Postum
(Use milk for making Postum)

* A Nutrition Program and Teaching Outline—Bowes—Philadelphia Child Health Society, 311 South Juniper Street, Philadelphia, Pennsylvania.

DINNER

Beef, chicken or lamb
 Mashed or roasted potatoes
 Creamed or buttered peas, cauliflower, or asparagus
 Lettuce, celery or sliced tomato
 Bread and butter
 Ice cream, chocolate pudding or tapioca pudding

LUNCH OR SUPPER

Soup
 Vegetable or fruit salad
 Lettuce, peanut butter or cream cheese sandwiches
 Fresh, stewed or canned fruit
 Molasses cake or cookies

BREAKFAST

Stewed prunes or baked apple
 Oatmeal or cornmeal with milk
 Cooked egg
 Toast or rolls—butter
 Milk or cocoa

DINNER

Sliced or minced ham—or liver
 Baked or scalloped potatoes
 String beans, carrots or spinach
 Lettuce, celery or cole slaw
 Bread—butter
 Glass of milk
 Fruit gelatin

LUNCH OR SUPPER

Any left-over or fresh creamed vegetable on toast
 Whole wheat bread or rolls—butter
 Custard, junket or bread pudding

DINNER

Fish chowder or creamed fish
 Baked, creamed or mashed potatoes
 Stewed tomatoes with onion
 Romaine, endive or watercress
 Bread—butter
 Cocoanut or butterscotch pudding

LUNCH OR SUPPER

Baked macaroni or spaghetti with small amount of cheese
 Green vegetables
 Brown bread—butter
 Milk
 Apple sauce, baked apple or any fresh fruit

HELPFUL HINTS

Foods to Avoid

Coffee and tea, wine, beer or any other alcoholic drink. Rich cake, pies, pastry (fruit pies and plain cakes and cookies may be used in moderation).

Candy as a daily source of sweets. (Candy made from molasses, honey, brown sugar, maple syrup, and fruit may be eaten in small quantities occasionally. It should be eaten only at the end of the meal.)

Points to Remember—

Eat meals sitting at a table and without hurry.

Chew all food well.

Help to make meal time cheerful and pleasant for the entire family.

Drink little water at meals especially when milk is taken.

Drink water freely between meals.

Learn to like all kinds of good foods by eating small amounts at first.

Malnutrition and Underweight Children should:—

Have a special examination by a physician to determine the causes.
Follow his advice.

Have all physical defects corrected if so advised by the physician.

Eat regular meals with emphasis on a good breakfast and a hot lunch.

Sleep ten to twelve hours every night.

Stop violent exercise such as roller skating, jumping rope and racing.

Avoid fatigue and too prolonged exercise of any kind.

Cultivate a cheerful, happy attitude.

Ask your physician about taking extra lunches of milk or fruit and the use of cod liver oil.

SUGGESTED MEALS FOR ADOLESCENTS*

BREAKFAST

Stewed apricots
Omelet or scrambled eggs
Bacon
Whole wheat toast
Butter
Milk

BREAKFAST

Orange juice
Shredded Wheat
Cinnamon toast with brown sugar
Butter
Milk

LUNCH

Baked beans
Scalloped tomatoes
Rolls and butter
Milk
Orange, apple or bunch grapes

LUNCH

Cream of split pea soup
Raisin bread sandwiches, plain
Jello with cream or milk or fruit

DINNER

Swiss steak
Stuffed potatoes
Buttered beet tops, spinach or chard
Raw celery or spring onions
Glass of milk
Ice cream or pudding

DINNER

Broiled liver or hamburger steak
Creamed potatoes
Savory beets
Bread—butter
Plain salad with French dressing
Milk
Fruit cup—cookie

BREAKFAST

Stewed figs with lemon
Cornmeal—molasses
Graham toast—butter
Milk

LUNCH

Mixed vegetable or fruit salad
Minced ham or peanut butter sandwiches
Cocoa
Cup cake

* A Nutrition Program and Teaching Outline—Bowes—Philadelphia Child Health Society, 311 South Juniper Street, Philadelphia, Pennsylvania.

DINNER

Vegetable soup with barley
Creamed dried beef
Riced potatoes
Cole slaw with dressing
Bread and butter
Milk
Gingerbread

NOTE: These meals include the most healthful foods and in good combinations for adolescents. Adequate provision is indicated for all growth needs rather than economical or minimum allowances.

Special Food Points for Boys

Adolescent boys often have unusually large appetites. In attempting to satisfy hunger they may eat too much at meals, between meals, and too many sweets, causing digestive disturbances and pimples on the face and neck.

To Satisfy Appetite Without Harmful Results

Eat well-balanced meals such as those given in the menus.

Eat a variety of wholesome food, especially leafy vegetables.

Avoid eating too much of any one food.

Take time to eat and chew all food thoroughly.

Drink plenty of water between meals. Restrict water at meals.

Drink only one or two glasses of milk at a meal—only one glass of milk with the heavy meal of the day.

Eat plenty of butter on bread and vegetables.

Griddle cakes, doughnuts, rich cakes and pastries may be eaten occasionally for variety and as part of a meal. They are hard to digest and should be avoided by boys with poor digestion and tendencies to pimples on the face. Better varieties of sweets are suggested in the menus.

Do not eat between meals, especially pastry, cakes or candy. If extra lunches are advised for individuals, milk, sandwiches or fruit are best.

Special Food Points for Girls

Adolescent girls do not usually care for large amounts of food. Their appetites are often finicky and they are more apt to eat too little than to overeat.

Girls should

Eat three well balanced meals such as those suggested. *This includes an adequate breakfast before going to school.*

Girls need extra iron for good blood. Eat regularly foods rich in iron as eggs, liver, beef, leafy vegetables, dried peas and beans, figs and molasses.

NOTE: Some girls crave pickles, sweets, or raw starchy foods. Only a limited amount of pickles or sweets should be eaten. Avoid raw starches. Such food cravings usually indicate poorly balanced, irregular meals and are overcome by eating proper amounts of milk, raw fruits and vegetables.

Prevent and Correct Underweight and Malnutrition

All boys and girls should maintain their weight or should show a steady increase in weight over any definite period of time. Loss of weight predisposes to colds, pneumonia, tuberculosis, and may lead to failure in school work.

Overweight in Adolescence

Adolescents more than 15 to 20 pounds over-weight for height should:—Have a careful medical examination and guidance by a physician. If no specific physical condition is found, excessive overweight can *safely* be reduced by following these suggestions:—Stop eating sweets, especially candy, cake, jam, and jellies. Eat less ice cream, bread, cereals, potatoes and butter. Eat nothing between meals. Do not try “reducing diet” unless recommended by your physician.

Eat plenty of fruits and green vegetables. They satisfy the appetite and are not fattening. One pint of milk daily is still advisable. It is much safer to reduce sugars, starches, and excessive amounts of fat than to exclude milk.

Take more outdoor physical exercise.

IMPORTANT FOODS FOR SCHOOL CHILDREN

Fruits—Why Fruits Are Excellent Health Foods.

They are one of Nature’s best food tonics.

They give us strength and energy.

They give us roughage—to help prevent constipation.

They give us many minerals—necessary for good health.

They give us vitamins to make children grow, to protect us from certain diseases and to help us to enjoy better health.

They are attractive in color and help us enjoy our meals.

Raw, Fresh Fruits are Best—Eat some fresh fruit every day. There are many from which to choose.

Apples
Apricots
Bananas
Berries

Grapes
Cherries
Grapefruit
Melons
Oranges

Peaches
Pears
Plums
Pineapples

Health Points about Fresh Fruits—

Bananas should be eaten only when ripe. Bananas are not ripe until the outside skin is turning brown; the fruit itself, however, should be firm.

Most fruits are best if eaten raw; no minerals or vitamins are then lost.

The skins, well washed, of such fruits as apples, pears, plums are valuable for all except young children and individuals with poor digestion. These skins are excellent for mastification, for natural cleaning of the teeth and for roughage.

When fruits are cooked, cook only long enough to make tender, in a very small quantity of water tightly covered. Use very little sugar, add it just before removing from the fire. Only half the usual quantity is then necessary to obtain the desired sweetness.

Points about Dried Fruits—

All dried fruits are rich in food value. They should not, however, replace fresh fruits. Dried fruits have much less vitamin value than fresh fruits, and often are less easily digested.

Dried fruits are comparatively cheap so are useful as low cost foods.

Dried fruits such as apples, pears, peaches and prunes, should, as a rule, be cooked. Wash thoroughly, then soak overnight in lukewarm water. Cook tightly covered, in the same water in which the fruit is soaked. A few slices of orange or lemon improves the flavor greatly. Sugar is not necessary for these fruits. If used, add only a small quantity and just before removing from the fire as with fresh fruits.

Cereals

Give us strength and energy

Are one of our cheapest foods

Help us to use and increase the amount of milk in our diet

Whole cereals and preparations made from them are better than refined cereals

They contain more lime to help build strong teeth and bones

They contain more iron and other minerals necessary for health

They contain more roughage and other essentials to prevent constipation

They contain more vitamins to keep us in general good health

List of whole cereals and whole cereal preparations

Scotch or Irish Oatmeal
or Rolled Oats

Unbolted Cornmeal

Cracked Wheat

Unpolished Rice

Pettijohn

Ralston

Wheatena

Shredded Wheat

Whole Wheat Bread

Graham Bread

Graham and Whole Wheat Crackers

Some cereals are much cheaper than others

Oatmeal		Cornflakes
Hominy	<i>are cheaper than</i>	Puffed Wheat
Cornmeal		Post Toasties

Vegetables—Five reasons for eating vegetables

They are one of Nature's best tonics

They give us strength and energy

They give us roughage—to help prevent constipation

They give us various minerals, necessary for good health, good blood,
and to help build strong bones and teeth

They give us vitamins—to keep us in general good health

Leafy vegetables are best—eat at least one of these every day

Spinach	Beet greens
Swiss Chard	Cauliflower leaves
Cabbage	Lettuce
Brussels Sprouts	Romaine
Kale	Endive—best if eaten raw except for very young children
Dandelion	Watercress
Parsley	

All other vegetables are healthful—eat at least one besides potatoes daily in addition to leafy vegetables

Tomatoes	Potatoes	String Beans
Peas	Carrots	Onions
Beans	Beets	Egg Plant
Celery	Parsnips	Squash
Cauliflower	Turnips	Salsify

NOTE: The health value and flavor of vegetables are lost by overcooking—cook only long enough to make tender and in as little water as possible. Save all water in which vegetables are cooked and use in soups or gravy.

Milk soups

Milk may be used with many vegetables to make nourishing soups. A milk vegetable soup is one of the best foods for the family.

It is also one of the best ways to help the children use more milk, the most valuable and one of the cheapest foods for health.

Milk soups may be made from many different vegetables such as lentils, beans, dried peas, corn, celery, onions, spinach, potatoes and tomatoes.

Either left-over vegetables or freshly cooked ones may be used.

Use only one vegetable at a time.

This provides opportunity to make different kinds of soups and prevents children especially from refusing to eat them.

THE SCHOOL'S OBLIGATION

One of the school's obligations is to cooperate with the home in seeing that every child has a nutritious noon meal. Since comparatively few children can have this meal at home it becomes the obligation of the school not only to provide a sanitary, comfortable pleasant place for eating the lunch brought from home or the lunch provided at school, but in many cases to provide the whole or part of the noon meal. In the case of undernourished children, extra lunches, including milk, should be encouraged.

THE VALUE OF A HOT LUNCH*

Day after day throughout the school year children who are dependent upon the lunch box packed at home for their noon meal are deprived of a hot dish. This is especially true in our rural schools. As a result we have many poorly nourished children, and in some instances they are malnourished. We have pupils who are not prepared to meet the daily physical and mental strain to which they are subjected. Daily, and otherwise good digestion of a growing child is being abused by cold lunches. Right food for the growing child means a healthier man or woman in later years.

Nutritionists maintain that the growing child needs one hot dish for lunch, regardless of the season of the year. Why? Because it saves the body heat and energy, gives a feeling of comfort and warmth, and assists digestion in a general way.

"A regular school lunch, shared by teachers and pupils, has tremendous advantages. If only one hot dish—perhaps soup or cocoa—can be provided at school to supplement what the children bring from home, it draws the pupils together socially, so that the meal is taken in a more orderly fashion, and experience in hundreds of rural schools shows that it results in improved physical condition of teachers and pupils. When they leave home early in the morning, travel a considerable distance in the cold, and return only in time for supper, the cold food carried in their boxes would often be really insufficient for their body needs, even if it were in the best form."—Mary S. Rose, Ph. D.

The hot dish prepared at school has not only resulted in marked improvement in the physical condition of pupils, but psychologists have recently gone on record stating that it has a pronounced effect on behavior problem pupils. As a nutrition measure, the school lunch functions in at least two ways:

1. It provides an actual meal for the children, and
2. It offers a means for educating children who choose foods suitable for lunch.

In accordance with the first function, the school lunch then should aim to provide *at least one-third of the daily food requirement of every pupil*, and it should be served at a minimum cost—the actual amount to

* The Rural School Lunch, and

* The Role of the School Lunch in a Nutrition and Health Program—Eichelberger—Evaporated Milk Association, Chicago, Ill.

be gauged by the status of the community. In fact, certain conditions may obligate a school to provide a school lunch. The distance of the schools from the homes of the children should be an important deciding factor.

In farm districts where children must go long distances—even in buses—or in cities where children live far from school, a noon lunch should by all means be provided. In the same way, in industrial sections where mothers and a home lunch would no doubt be unsuitable, the school again should be responsible for providing a means of a hot noon lunch. By serving this noon meal, the school is acting in place of the home, so is obligated to see that this meal is an adequate one as well as an attractively prepared, clean one.

As an educational agency, the lunch should be of value not only for the pupils, but for their parents and even the teachers. There is no better link between the home and the school. The school lunch room is an appropriate place to teach pupils proper selection of inexpensive, nourishing, attractive meals, suited to individual needs. It should be a laboratory where teachers can ascertain the value of their health teachings and improve their methods. In addition it may also furnish training in dining room conduct and etiquette as well as health. This type of program is possible if the school system has been far-sighted enough to recognize that nutrition teaching should be included in the health educational program in every school grade. Needless to say, this instruction must be given to all children, boys as well as girls, well nourished as well as malnourished.

TYPES OF SCHOOL LUNCH ORGANIZATIONS

A. THE COLD PACKED LUNCH

The cold packed type of lunch is used more universally than any other type; therefore it is particularly important that the teacher secure the cooperation of the homes in providing the pupils with the right kind of food.

B. THE HOT JAR LUNCH

The "hot jar" lunch has offered a very practical and inexpensive method of supplementing cold lunches with a hot dish in many schools. It has been used in one-room schools particularly, and in consolidated rural schools where facilities are not available for preparing a more elaborate lunch.

C. THE SUPPLEMENTARY HOT DISH

Another method of supplementing cold lunches which the pupils bring from home is by serving one hot dish prepared at the school. This plan can readily be carried out in rural consolidated schools, small rural high schools, or high schools with large non-resident enrollments.

D. A HOT LUNCH CONDUCTED ON A LIMITED BASIS BY HOME ECONOMICS DEPARTMENT

In many schools having home economics departments, it is possible to serve a hot lunch on a limited basis. It is important that this type

of program should be organized in such a way that the regular instructional work of the home economics department is not hampered and so that the pupils are not exploited in carrying on the program.

E. THE SEPARATE SCHOOL CAFETERIA

The school cafeteria should be operated as a project apart from the home economics department, although the teacher of home economics may supervise this activity in districts where the cafeteria is not large enough to warrant the employment of a dietitian for the cafeteria.

THE SCHOOL LUNCH FOR THE SMALL SCHOOL

This lunch may be either type A, B, or C, or combinations of these.

A. THE COLD PACKED LUNCH

Pattern Menus—not including a hot dish

Jar of whole milk	Whole milk
Grated carrot sandwich with lettuce and mayonnaise	Shredded cabbage sandwich Jelly sandwich
Tomato and egg sandwich on whole-wheat bread	Cup of baked custard
Cookies	
Apple	or

Peanut-butter and relish sandwich, or
 Salmon sandwich
 Sliced tomato sandwich
 Gingerbread
 Milk
 Fruit in season

Suggestions for Sandwiches

Bread—whole wheat	Celery—combined	Peanut Butter—com-
rye	with	bined with
brown	nuts	bacon
graham	olives	lettuce
Lettuce	egg	celery
Lettuce and tomato	Cheese—combined	apple
Lettuce and egg	with	raisin
Mixed fruit	nut	jelly
	olives	
	date	
	bacon	

PACKING THE CARRIED LUNCH

Milk or any beverage may be carried in:

Half-pint milk bottles
 Fruit jars
 Screw-top jars
 Paper cartons with tight fitting tops

Semi-soft foods may be carried in screw-top jars, covered with paper cartons, jelly-glasses with tight lids.

Semi-soft foods:

- Stewed fruits
- Puddings
- Custards
- Gelatin
- Cottage cheese

Lunch container should be clean and should protect the flavor and shape of the foods. They should be washed and rinsed daily with hot water.

Satisfactory containers:

- Tin or granite pail (holes for ventilation)
- Folding tin box
- Tin box with vacuum jar

Less satisfactory containers:

- Cardboard box—crushes easily
- Cloth box—difficult to clean
- Paper sacks—food crushes easily
- Baskets—difficult to clean

Firm foods should be packed in the bottom of the container.

Each kind of food should be wrapped in waxed paper, with the exception of fruit.

Two paper or cloth napkins are useful. One napkin used as a desk cloth.

Knives, forks or spoons should be included, if needed.

A shelf in the kitchen for just the lunch-box accessories is convenient. It may contain:

- Waxed-paper roll
- Paper napkins
- Glass jars
- Paper cartons
- Scissors
- String
- Paper cups, spoons, forks
- Straws
- Wrapping paper
- Storage Space for the Lunch Boxes

A clean and neat shelf or cupboard large enough to hold the lunch boxes should be provided in a cool space, preferably.

NOTE: When breakfast is served at 7:00 or 7:30 the child should have something to eat at the morning recess, such as a part of his milk with two whole wheat graham crackers, or a bread and butter sandwich, or some fruit. Meat, jelly or egg sandwiches, which dull the appetite for the noon meal should not be eaten at this time; nor should any of the sweets provided for the noon lunch.

CONDITIONS UNDER WHICH THE LUNCH SHOULD BE EATEN

As this type of lunch is usually eaten in the classroom, it is important to have the room well aired before lunch. Before lunch is served, see that each child has been supplied with soap and a paper towel so that his hands may be washed before eating.

Appoint two pupils to distribute the lunch boxes and also to distribute sanitary drinking cups to each pupil.

Have each pupil spread a clean paper napkin on his desk before opening his lunch.

After the children have finished their lunch, have each clear his desk and dispose of any remaining food, paper napkins and cup. The classroom should be placed in good order following the lunch. Waste baskets containing food wrappers should be emptied immediately.

The lunch period may be made more enjoyable by maintaining a cheerful, happy atmosphere during the meal permitting no unpleasant scenes to arise through the correction of a child or the discussion of unpleasant happenings. Unhappiness, worry, fear, anger inhibit appetite and retard digestion.

B. THE HOT JAR LUNCH

Milk, vegetable and egg dishes should form the basis of the Hot Jar Lunch. If parents have canned vegetable mixtures to provide for the school lunch or if a variety of fresh vegetables is available, cream of vegetable soup will occupy an important place. To avoid having pupils tire of creamed soups, these may be alternated with meat-stock soups, creamed eggs or meat.

Pattern Menus

Creamed of tomato soup
Bread and butter or
vegetable sandwiches
Orange
Sponge cake

Vegetable soup
Minced ham sandwiches, or
Tuna fish sandwich
Celery
Milk

or

Chowder
Ground or minced cheese,
creamed with or without
onion and celery
Stewed dried fruit
Milk

Suggested Soups

Tomato
Vegetable
Chowders
Bean
Pea
Peanut butter

Cream of Asparagus
Cream of Corn
Cream of Onion
Cream of Tomato
Cream of Spinach

Suggested Beverages

Cocoa	Maple milk
Chocolate milk	Egg nog
Spiced milk	Egg and milk
Caramel milk	Milk

SERVING THE HOT JAR LUNCH

The chief equipment needed is a large dish pan or boiler with a rack upon which the jars are placed. In most one-room schools the room heater or stove can be used for heating the jars. Where the room heater will not serve this purpose an oil, coal, or gas stove can be used.

The children old enough to be of real assistance should take responsibility for heating the jars after loosening the covers and should serve the food.

Children should remain in their seats while the servers pass the heated food to them.

Each child should be responsible for clearing off his desk and for disposing of papers and refuse. Older pupils should in turn take care of container in which jars have been heated.

The serving and eating of the lunches will be similar to that for type A.

C. THE SUPPLEMENTARY HOT DISH

The food prepared for the school lunch should be simple in character in order that it may be eaten by the younger as well as by the older children. Milk should be used very frequently as it is rich in building material. The dish selected should be such as may be prepared in a short time and with the limited equipment available, in the small school. The lunch should not include dishes which digest slowly such as fried foods, sausage or weiners, or which may be irritating to the digestive tract such as mustard, pickles, black pepper, etc. The hot-lunch schedule should be made a week in advance and posted so that lunches from home can be planned to supplement it.

One of the objectives of having the hot-lunch is defeated unless each child has some of it. It should be kept simple. It need never become burdensome. The teacher should keep in mind that it is the nutritive value of the hot dish and not its elaborate preparation and serving that brings about the desired results.

Pattern Menus

Cheese dishes	Creamed vegetable dishes	Creamed soups
Sandwiches	Beverage, hot or cold	Crackers
Milk shake	Whole-wheat bread and	Fruit salad
Fruit	butter	Milk
	Pudding or fruit	A sweet

Hot Dishes

Vegetable a la King	Scalloped Macaroni	Cheese Fondue
Scalloped fish	Cheese Dreams	Creamed vegetables
Creamed cheese	Spaghetti with	Scalloped vegetables
Macaroni and cheese	Tomato sauce	Corn pudding
Creamed bacon	Creamed eggs	Scalloped eggs

ORGANIZATION OF WORK

If the hot lunch plan is a new one in many school districts, the task of procuring the equipment will fall to the present teacher. One of the methods she may wish to use is to have the parents to a meeting at the schoolhouse where the hot lunch may be explained. A list of necessary utensils should be made and donations of utensils invited. Probably most of the needed articles can be secured this way.

After the equipment is secured, the daily routine of work must be so planned as to consume as little time as possible. The foods for each of the five days should be planned a week ahead and supplies ordered in good season. The children may be organized into three groups: group A, cooks the food; group B, serves the food; group C, washes and dries the dishes, replaces dishes and food supplies.

Duties of Group A. Study the recipe the day before it is cooked. Determine the quantities of materials needed and become familiar with the method of combining them. On the day when the food is to be cooked, measure the ingredients before school or at recess. At the required time before noon, start the cooking of the food; keep it warm until ready to serve.

Duties of Group B (serving): similar to that for Type A Lunch.

Duties of Group C (washing dishes): similar to that for Type A Lunch.

If space permits, it is desirable to serve the lunch in a special lunch room at tables with chairs or benches, rather than in the classroom.

EQUIPMENT AND SUPPLIES FOR THE HOT LUNCH FOR A SMALL SCHOOL

Necessary Articles

- One stove, coal, oil, gas, or electric
- One large dish pan or broiler with rack for heating jars
- One additional dish pan
- One kettle—6 to 8 quarts
- One quart measure
- Two tablespoons
- Two teaspoons
- Two paring knives
- Two stirring spoons
- One potato masher
- One can opener
- One soap dish
- * One garbage can, 4 gal.

NOTE: A smaller garbage can should be used if papers and napkins can be kept separate from true garbage. Garbage can *must* be emptied and cleaned daily.

Two asbestos mats
 One pint measuring cup
 One vegetable brush
 Six towels, one yard
 Two dish towels
 Two large saucepans

Additional: (Handy and helpful equipment)

Tea kettle
 Ladle
 Colander
 Egg beater
 Wire whip
 Double boiler
 Wax paper
 Paper napkins
 Adequate storage space
 Washing facilities
 Serving space

NOTE: A bowl, plate and silver for each child may be brought from home and washed and kept at school.

METHODS OF FINANCING THE HOT DISH

In order to feed those children who are most in need of food the hot dish should be available to every child at the *lowest possible cost*.

Methods of financing a school lunch include:

Appropriation by the school board
 Money secured through entertainment such as school plays, etc.
 Donations by an organization or by individuals—Parent-Teacher Associations and Women's Clubs
 Contributions from parents or children, preferably monthly or weekly—contributions may be food or money for meal ticket. In larger schools the sale of a meal ticket is practical. (When children are given money for school lunches, the temptation is great to spend some of it on candies, pickles, etc.)

TYPES OF MANAGEMENT IN THE PREPARATION OF THE HOT LUNCH DISH

Food prepared by a paid worker at school or at home. The person employed may be a home-maker living near the school who has free time or a high school girl who must earn her way.

Food prepared by older girls and boys under the supervision of a teacher.

Food prepared at home or at school by mothers or P. T. A. workers who take turns as individuals or in groups of two.

Food prepared by a teacher.

Food prepared at home, carried to school by each child in glass jars.

SERVING THE HOT DISH—THREE METHODS

The type of service depends on the size of the school and the space and the equipment. Children should be encouraged to wait on themselves and to return the soiled dishes to the place assigned.

In a small room if a table is available, all sit down together at the table for lunch. A clean white cloth of oilcloth or other material is desirable. Lunch served at a table affords excellent opportunity for teaching table manners.

Lunch is served on school desks. Desks should be covered with clean cloth or napkin (paper).

Where space permits, the best plan is to serve lunch in a special lunch room at tables with chairs or benches.

ADVANTAGES OF A HOT DISH WITH THE CARRIED LUNCH

It encourages bringing a better lunch from home.

Being hot, it aids digestion and encourages slower eating.

It helps to make better balanced meals possible.

It tends to promote better attendance. Children are more likely to want to come to school because of the hot lunch and the interesting activities connected with it.

By better nourishment children are enabled to maintain regular attendance and to do better school work.

Improvement in behavior and even in the scholarship of many children is noted and reported following the introduction of the hot dish.

Teachers receive the same health benefits as children and can, therefore, work more efficiently.

SUGGESTED RECEIPTS—Quantities will serve—20 to 25 portions

Cream Soups

Cream soups are a combination of a thin white sauce and a strained or finely chopped vegetable pulp. Cook the vegetable in water until tender, rub through a sieve or chop very fine and save the water in which the vegetable has been cooked. This liquid or vegetable stock may be used as part of the liquid in making the sauce. Add vegetable stock and vegetable pulp to the thin white sauce, reheat and serve hot.

For one quart of thin white sauce use two cups of any vegetable, such as corn, peas, beans baked beans, celery, potatoes, asparagus or spinach.

Thin White Sauce for Soups

- $\frac{1}{2}$ cupful butter
- $\frac{1}{2}$ cupful flour
- 2 tsp. salt
- $\frac{1}{3}$ tsp. pepper
- $1\frac{1}{2}$ quarts milk
- 2 cupfuls vegetable stock

Scald three-fourths of the milk in a double boiler. Melt butter in a saucepan, remove from fire, add flour, salt and pepper; rub smooth, add one-fourth of the milk, stir until smooth, then add remainder slowly. Return to fire, stirring constantly, and boil for one minute.

Medium White Sauce for Creamed Vegetables
(creamed cheese, scalloped eggs, fish and vegetables)

$\frac{3}{4}$ cupful butter
1 cupful flour
2 tsp. salt
 $\frac{1}{3}$ tsp. pepper
2 quarts milk

Make the same as thin white sauce.

Creamed Vegetables

Vegetables, such as asparagus, cabbage, carrots, celery, onions, parsnips, peas, potatoes and turnips may be served with the cream sauce, using one quart of sauce for every two quarts of vegetables.

Vegetable A La King

1 quart cooked, diced carrots
1 quart cooked peas
1 cupful grated cheese
1 cupful cooked celery
20 slices bacon
 $4\frac{1}{2}$ cupfuls medium white sauce

Add the drained vegetables and cheese to the white sauce. Reheat and serve with crisply browned bacon or pour into a baking dish, lay bacon on top and bake in a moderate oven (350 degrees) until bacon is crisp and golden brown.

Creamed Cheese on Toast or on Macaroni, Spaghetti or Noodles

$\frac{3}{4}$ cupful butter
1 cupful flour
2 tsp. salt
1 tsp. paprika
2 quarts milk
2 cupfuls grated cheese
2 loaves bread, sliced and toasted

Make a medium white sauce of butter, flour, salt, paprika and milk. Boil sauce one minute, add the grated cheese, stir until melted and serve hot on toast. Chopped green pepper, pimento or parsley or chopped cooked bacon may be added to the sauce for color, flavor and variety.

Creamed cheese sauce may be used on macaroni, spaghetti or noodles, using one quart of sauce for one and one-half quarts of cooked macaroni, spaghetti or noodles. Cover with bread crumbs and bake in a moderate oven 350 degrees until golden brown on top.

Rice and Tomatoes

(serves twelve)

2 cupfuls rice
4 quarts boiling water
4 cupfuls canned tomatoes
 $\frac{1}{4}$ cupful butter
1 cupful bread crumbs
Salt and pepper to taste

Cook the rice until tender in boiling salted water, drain. Add tomato, butter, crumbs and salt and pepper to taste. Reheat until mixture is thoroughly hot.

Chocolate Syrup

(milk shakes hot cocoa, puddings, etc.)

1 pound cocoa
2 pounds sugar
2 tsp. salt
2 quarts boiling water

Mix cocoa, sugar and salt in saucepan, add boiling water gradually and boil gently five minutes or until a smooth, thick paste is formed. Cooking in a double boiler for twenty to thirty minutes improves the flavor. This syrup may be poured into glass jars, cooled, covered and kept in a cool place for several days.

It may be used for milk shakes, hot cocoa, or as a sauce for puddings and other desserts.

For making milk shakes allow two tablespoonfuls of syrup for one cupful milk.

For making cocoa allow one tablespoonful for one cupful milk.

Cocoa

$\frac{3}{4}$ cupful cocoa
 $\frac{3}{4}$ cupful sugar
1 tsp. salt
3 cupfuls water
3 quarts milk

Make a paste of cocoa, sugar, salt and water in the upper part of double boiler. Boil directly over fire three to five minutes or until thick. Add milk, heat over hot water, beat well and serve hot.

NOTE: Unsweetened evaporated milk mixed with an equal amount of water may be substituted wherever milk is needed.

A HOT LUNCH CONDUCTED ON A LIMITED BASIS BY HOME ECONOMICS DEPARTMENT

The lunch room offers a splendid opportunity for the cooking classes to do large-quantity cooking, and although at no time should the cooking classes be exploited for the sake of the lunch room they nevertheless often prepare some dishes for the lunch room and in this way get valuable experience in large-quantity cooking.

Home economics classes may prepare one or more dishes to be served in the cafeteria. For example, one day a salad and muffins, still another day a roast and dessert etc.

The home economics teacher should work with the students in ordering the quantities for each dish.

It is a decided incentive to the cooking class pupils to have the food they prepare serve a definite purpose. Also, they are taught to prepare food in large quantities instead of on the usual small quantity plan.

Close attention should be paid to hygienic conditions.

The menus should be carefully planned. The food should be well-cooked.

Attention should be given to the serving of meals stressing cooperation in working for proper food selection table manners and the social side of eating.

The school lunch may be a management project for upper-class girls in the school. This will involve:

Planning the lunch

Doing the marketing

Preparing of the food

Serving the food

Setting up standards for good table manners

Keeping a record of expenses and recipes

Paying the bills

Providing for adequate storage of perishable foods

THE SEPARATE SCHOOL CAFETERIA

The school cafeteria should be operated as a project apart from the home economics department, although the teacher of the home economics may supervise this activity in districts where the cafeteria is not large enough to warrant the employment of a dietitian for the cafeteria. The following principles should be born in mind in the organization of the cafeteria program:

All of the actual work of cooking and cleaning should be done by outside help employed for this purpose. Pupils may be employed to assist in serving, but their activities should be limited so that their school work will not be interfered with. In no case should free pupil labor be exploited.

The cafeteria should be conducted on a non-profit venture. It should be operated by the school and under no circumstances should it be operated on a concession basis. Prices should be just high enough to cover the actual cost of the food plus the operation of the cafeteria.

Close attention should be paid to hygienic conditions.

The menus should be carefully prepared. The food should be tasty and attractive.

The sale of candy should be carefully regulated.

Attention should be given to the serving of meals stressing cooperation in working for personal cleanliness, proper food selection, table manners and the social side of eating.

While there should be teacher supervision of the lunch room, the most effective supervision can be obtained only through the cooperation of the pupils themselves. For this reason it is doubtful if the practice of having teachers eat with their home room groups as a permanent arrangement is desirable. (Whenever possible a separate dining room should be provided for the teachers.)

CHECKING THE RESULTS OF THE IMPROVED SCHOOL LUNCH

Parents, teachers, and children would find it interesting to study the following results and to see whether or not the improved lunch may have made a substantial contribution.

Health Results

Manifestations of physical fitness such as improved posture and vigor, zest in play and work.

Decrease in absence from school owing to illness.

Normal gain in weight and height of children during a given period. (Gain in weight and height is but one of many indications of health.)

Educational Results

Increased interest in school work.

Less restlessness, listlessness, lack of concentrated attention and effort.

Better attendance.

Knowledge shown of balanced dietary through better food selection in carried lunches.

Social Results

Improved habits in table manners, cleanliness, and sociability.

Cooperation among pupils, teachers, and parents.

Improvement in consideration for others and the observance of courtesies.

Increased interest of the home, the school, and the community toward its responsibility for the child's welfare and health.

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PAMPHLETS

Valuable pamphlets on diet have been made available through the following organizations:

Pennsylvania State Emergency Relief Board, Harrisburg, Pennsylvania

Getting the Most for Your Food Money, Revised, December, 1933, 2 pages—Free

Six Leaflets Using Low Cost Foods—with Menus and Recipes—

Free:

One Dish Meals

Bread and Cereals

Desserts and Sweets

Meat and Fish

Milk

Vegetables

How to Use Salt Pork—1 page (Prepared by U. S. Bureau of Home Economics)

State Department of Public Instruction, Harrisburg, Pennsylvania

Bulletin 12, Course of Study in Health Instruction and Physical Education

Bureau of Home Economics, U. S. Department of Agriculture, Washington, D. C.

How to Spend Your Money, 1933, 1 page—Single copies free from the Bureau. 50 copies for 25 cents—Send cash with order to Superintendent of Documents, Washington, D. C. Lower rates for larger lots.

Family Food Budgets for the Use of Relief Agencies. Revised 1933. Single copies free. Ask for quantity rates. Weekly market orders for 2 to 8 individuals on basis of "adequate diets at minimum cost" and "restricted diets for emergency use."

Getting the Most for Your Food Money, 1931, 4 pages—free, 100 for 50 cents. Send cash orders to Superintendent of Documents, Washington, D. C. Lower rates for larger lots.

The Market Basket, 4 pages—free. A weekly publication with practical suggestions on various seasonal low cost foods, market orders and recipes. Valuable for newspaper articles.

Diets at Four Levels of Nutritive Content and Cost, 1933, 59 pages. Detailed analyses on low cost diets, 5 cents. Order copies from Superintendent of Documents, Washington, D. C.

American Child Health Association, 50 West 50th Street, New York City

Emergency Nutrition (The food needs of children), Henry C. Sherman, 1931, 4 pages—3 cents, 10 to 24 copies, 1 cent each. Lower rates for larger lots.

Food at Low Cost—Lucy H. Gillett, 1931, 4 pages, 3 cents. Lower rates for larger lots.

Good Food for Little Money (to protect health of children)—Lucy H. Gillett, 1932, 2 pages, 3 cents. 4 to 9 copies, 1 cent each. Lower rates for larger lots.

Pennsylvania State College Extension Service, State College, Pennsylvania

Feeding the Family at Low Cost, 20 pages, free. Market orders, menus, recipes using low cost foods. Data on canning and preserving foods.

Philadelphia Child Health Society, 311 South Juniper Street, Philadelphia

Evaporated Milk Association, 203 North Wabash Avenue, Chicago, Illinois

Feeding a Family at Low Cost, 13 pages—free. For nurses, case workers and the intelligent housewife.

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Metropolitan Life Insurance Company, One Madison Avenue, New York City

Three Meals a Day, 1934, 16 pages—free.

Poster—For Good Health, 1934—free.

National Dairy Council, 221 North LaSalle Street, Chicago, Illinois
Living Well at Low Cost, 4 pages, 2 cents. 20 to 100, 1 cent each. 100 for 72 cents. Food budget, menus and recipes using fresh milk.

